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10/523,797	02/08/2005	Seung-Bae Park	P57354	6168
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Robert E Bushnell Attorney at Law Suite 300 1522 K Street NW Washington, DC 20005-1202			EXAMINER SCHWARTZ, DARREN B	
			ART UNIT 4193	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/523,797

**Applicant(s)**

PARK, SEUNG-BAE

**Examiner**

DARREN B. SCHWARTZ

**Art Unit**

4193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 February 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-20 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 08 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date 02-08-05  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because drawings: 2c, 2d, 5a, 5c, 6a, 6b, 6c, 6e, 8a, 8b, 8c, 8d, 9a, 9b, 9d, 10a, 10b, 10d, 11a, 11b, 11c, 16b, 16c, 16d, 18a, 18b and 18d are referenced in the specification as containing dotted (for instance, see page 16, lines 18-19 and page 17, lines 19-20). The Examiner holds that said drawings contain solid lines and is not readily apparent as to where the dotted lines can be found. The Examiner points out that Figures 34a and 34b contain dotted lines which are readily apparent. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

2. Claim 11 is objected to because of the following informalities: Claim 11, line 3 recites "the special symbol." This should be changed to "a special symbol."

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3-10, 14 and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kubo et al. (U.S. Pat 6367015 B1), hereinafter referred to as Kubo.

Re claims 1 and 17: Kubo teaches a password input method by the matching of cells (Abstract), comprising the steps of:

a step in which a matching board [Fig 29, elt 34: ID card] and a reference board [Fig 29, elt 32: screen] are displayed on a user interface (col 7, lines 22-30);

a step in which a user selects a certain cell on the matching board (col 7, lines 25-30; Fig 24A: col 25, lines 40-48); and  
a step in which a certain cell of the matching board selected by the user (col 7, lines 25-30; Fig 24A: col 25, lines 45-48); through a computation [Fig 24B] is matched with a cell [detected coordinates] including a password symbol [comparison results & numerical value] of the reference board (Fig 176, elts S123 & S125; col 25, line 60 – col 26, lines 3).

Re claim 3: Kubo further teaches that in order to match a certain cell of the matching board with the cell including the password of the reference board, a computation is performed with respect to the matching board (Fig 12D; Fig 16: col 19, line 66 – col 20, line 14; Fig 20, elt S152 & S153; Fig 24A & 24B;).

Re claim 4: Kubo further teaches said computation performed with respect to the matching board is a movement of the matching board (Fig 24A & 24B; Kubo teaches that regardless of placing the card on the tablet, the input/pin information is normalized as shown in Fig 24A).

Re claim 5: Kubo further teaches the symbols included in the cells of the reference board are displayed in a recovery extraction sequence or a sequence of their sizes (Fig 8: elts S58, S60, S61 & S63).

Re claim 6: Kubo further teaches the cells of the matching board are all different from each other or are all same or a part of the same is different (Fig 12B).

Re claim 7: Kubo further teaches the cell of the matching board is matched with the cell of the reference board using an input apparatus (Fig 29, elt 31; col 29, lines 43-50).

Re claim 8: Kubo further teaches when a computation is performed with respect to the matching board, a cell of the matching board being out of a range of the reference board is rotated and moved (Fig 24A & 24B: col 4, lines 57-59 and col 25, lines 23-26).

Re claim 9: Kubo further teaches a completion of the matching [punching/selecting digits on the card that correspond to their pin] between a cell [pin hole] that a user selects from the matching board [card] and a cell including a password symbol [digit] of the reference board is informed to a system (Fig 12A, 12B, 12C & 12D; col 17, lines 18-62).

Re claim 10: Kubo further teaches when a procedure for matching a cell that a user selects from the matching board [punching/selecting digits on the card that correspond to their pin] and a password symbol of the reference board is completed [location coordinates], the cell that the user selects from the matching board is informed to the system (Fig 12A-12D; col 17, lines 18-62).

Re claim 14: Kubo further teaches the symbols of the reference board [coordinates] sequentially matched with each cell of the matching board are the candidates of the password for thereby performing a user authentication process (Fig 12A-12D; col 17, lines 53—col 18, line 9).

Re claim 16: Kubo further teaches when a user selects a cell of the matching symbol, the user selects a certain cell including one password symbol being in his password Fig 15A & 15B; col 19: lines 51-55).

Re claim 18: Kubo further teaches a computation performed with respect to the matching board is not shown on a user interface (Fig 1, elt 1: col 5, lines 23-27).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art, hereinafter referred to as AAPA, in view of Smith, Jr. (U.S. Pat 6571336 B1), hereinafter referred to as Smith.

Re claims 1 and 17: AAPA teaches a password input method by the matching of cells, comprising the steps of: a step in which a user selects a certain cell on the matching board (page 3, lines 7-8); and a step in which a certain cell of the matching board selected by the user through a computation is matched with a cell including a password symbol of the reference board (page 3, lines 7-9).

However, AAPA does not teach a step in which a matching board and a reference board are displayed on a user interface.

Smith teaches a step in which a matching board and a reference board are displayed on a user interface (Fig 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified AAPA reference to display both display boards, as taught by Smith, as it is well known in the art that a display/reference board and an input/matching board are used for authentication purposes.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo et al. (U.S. Pat 6367015 B1), hereinafter referred to as Kubo, in view of Pimpo, (U.S. Pat 6021653 A), hereinafter referred to as Pimpo.

Re claim 2: Kubo teaches all the limitations of claim 1 as previously discussed.

However, Kubo does not teach a cell of the matching board selected by the user is matched with a cell including a password symbol of the reference board, the cell of the matching board that the user does not select is concurrently matched with the cell having the symbol that is not the password symbol of the reference board.

Pimpo teaches a cell of the matching board [tumbler rings] selected by the user is matched with a cell including a password symbol [the word or insignia] of the reference board [lug], the cell of the matching board [tumbler rings] that the user does not select is concurrently matched with the cell having the symbol that is not the password symbol of the reference board (Fig 1: elts 13 & 15). The Examiner holds that Pimpo teaches that once the matching insignia are matched by the tumbler rings (i.e. the word "LOCK" is shown as the passkey), other letters are "coincidentally" matched (i.e. "MPDL" and "NQEM" are simultaneously matched when the passkey LOCK is also matched).



It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Kubo reference to match symbols that are and are not part of the password, as taught by Pimpo, for the purpose of creating a more cumbersome interface. The Examiner acknowledges Pimpo to be a non-analogous art reference, however, it is well known that combination padlocks (i.e. password input devices) invoke this idea for the purpose as stated above.

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo et al. (U.S. Pat 6367015 B1), hereinafter referred to as Kubo, in view of Hardy et al. (U.S. Pat 5623546 A), hereinafter referred to as Hardy.

Re claim 2: Kubo teaches all the limitations of claim 1 as previously discussed.

However, Kubo does not teach a cell of the matching board selected by the user is matched with a cell including a password symbol of the reference board, the cell of the matching board that the user does not select is concurrently matched with the cell having the symbol that is not the password symbol of the reference board.

However, Hardy teaches a cell of the matching board selected by the user is matched with a cell including a password symbol of the reference board (col 4, lines 15-21), the cell of the matching board that the user does not select is concurrently matched with the cell having the symbol that is not the password symbol of the reference board (col 2, lines 55-61 and col 3, lines 22-29).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Kubo reference to match data the user

concurrently possesses and lacks, as taught by Hardy, for the purpose of preventing theft of the entire access key. By splitting the key, no one user will possess the key but a user will be granted access when the parts of the key are combined.

10. Claims 11, 12, 15, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo et al. (U.S. Pat 6367015 B1), hereinafter referred to as Kubo, in view of Smith, Jr., (U.S. Pat 6571336 B1), hereinafter referred to as Smith.

Re claim 11: Kubo teaches all the limitations of claim 10 as previously discussed.

However, Kubo does not teach said step for informing the cell that the user selects from the matching board to the system includes: a step in which at least more than one cell including the special symbol is displayed on the reference board; and a step in which the cell that the user selects from the matching board is matched with the cell including the special symbol of the reference board.

Smith teaches said step for informing the cell that the user selects from the matching board [Fig 4, elt 92] to the system includes: a step in which at least more than one cell including the special symbol is displayed on the reference board [Fig 4, elt 94] (Fig 11; Fig 13); and a step in which the cell that the user selects from the matching board is matched with the cell including the special symbol of the reference board (Fig 15: col 9, lines 52-57 ; col 7, lines 53-66).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Kubo reference to include special symbols on the reference board and have the user perform operations on the matching board with

respect to the reference board, as taught by Smith, for the purpose of providing a more cumbersome user interface and make PIN/password theft difficult.

Re claim 12: Kubo in view of Smith teach a cell that the user selected from the matching board is matched with a cell including a special symbol of the reference board, the other cells including the special symbols of the reference board do not match with any cell of the matching board (Smith: col 10, lines 53-57; see also Fig 15 of Smith, specifically elts 9 match while the letters do not match any number).

Re claim 15: Kubo further teaches the symbols of the reference board sequentially matched with the cells of the matching board matched with the cells including the special symbols are grouped and processed as the password (Kubo: Fig 12A-12D; col 17, lines 53—col 18, line 9; Smith: col 10, lines 53-57; see also Fig 15 of Smith, specifically elts 9 match while the letters do not match any number).

Re claims 19 and 20: Kubo teaches all the limitations of claim 18 as previously discussed.

However, Kubo does not teach a user transfers a certain signal so that the matching board is not shown on the user interface and the matching board is disappeared after a certain time is passed after the matching board is shown on the user interface.

Smith teaches a user transfers a certain signal so that the **reference** board is not shown on the user interface and the **reference** board is disappeared after a certain time is passed after the matching board is shown on the user interface (Fig 6, elts 206 and 214).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Kubo reference to stop displaying the reference board, as taught by Smith, for the purpose of providing the user with secured information and prevent the user from entering data while displaying critical data. It would have also have been obvious to clear information from the display after a brief period of time to prevent shoulder-surfers.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo et al. (U.S. Pat 6367015 B1), hereinafter referred to as Kubo, in view of Smith, Jr. (U.S. Pat 6571336 B1), hereinafter referred to as Smith, in further view of Pimpo, (U.S. Pat 6021653 A), hereinafter referred to as Pimpo.

Re claim 12: The combination of Kubo and Smith teaches all the limitations of claim 11 as previously discussed.

However, the combination of Kubo and Smith do not teach a cell that the user selected from the matching board is matched with a cell including a special symbol of the reference board, the other cells including the special symbols of the reference board do not match with any cell of the matching board.

Pimpo teaches a cell that the user selected from the matching board [tumbler rings] is matched with a cell including a special symbol [the word or insignia] of the reference board [lug], the other cells including the special symbols of the reference board do not match with any cell of the matching board (Fig 1: elts 13 & 15). The Examiner holds that Pimpo teaches that once the matching insignia are matched by the

tumbler rings (i.e. the word "LOCK" is shown as the passkey), other letters are "coincidentally" matched (i.e. "MPDL" and "NQEM" are simultaneously matched when the passkey LOCK is also matched).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the combination of Kubo and Smith references to match symbols that are and are not part of the password, as taught by Pimpo, for the purpose of creating a more cumbersome interface. Giving the broadest interpretation of the claimed invention, however, the combination padlocks (i.e. password input devices) invoke this idea for the purpose as stated above.

12. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo et al. (U.S. Pat 6367015 B1), hereinafter referred to as Kubo, in view of Sobrado et al., "Graphical passwords," hereinafter referred to as Sobrado.

Re claim 13: Kubo teaches all the limitations of claim 1 as previously discussed.

However, Kubo does not teach a plurality of reference boards are not overlapped from each other, and at the same time, are displayed on a user interface.

Sobrado teaches a plurality of reference boards are not overlapped from each other, and at the same time, are displayed on a user interface (Figure on page 6 and section "Movable frame scheme.")

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Kubo reference to display non-overlapping reference boards, as taught by Sobrado, for the purpose of providing a very

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cumbersome password interface with a plurality of frames while preventing shoulder-surfers from obtaining the password (see Sobrado: page 3, section "Our Goal").

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DARREN B. SCHWARTZ whose telephone number is (571)270-3850. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Nguyen can be reached on 571-272-1753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DS/

/Taghi T. Arani/

Supervisory Patent Examiner, Art Unit 4193 8/9/2008

